

Appl. No. 10/815,717

**RECEIVED
CENTRAL FAX CENTER****AUG 22 2007****REMARKS/ARGUMENTS****Claim Rejections – 35 USC 103**

The Examiner rejects claims 1-8, 10-17, 25-28, 30-32 and 34 under 35 U.S.C. 103(a) as being unpatentable over United States Patent Application Publication No. 2002/0058502 (“Stanforth”) and United States Patent No. 7,016,648 (“Haller”) further in view of United States Patent No. 6,522,877 (“Lietsalmi”). In response, Applicant respectfully traverses the Examiner’s rejection, as the Examiner has not fulfilled the requirements for establishing a *prima facie* case of obviousness under 35 USC 103. To establish a *prima facie* case of obviousness under 35 USC 103, the prior art reference (or references when combined) must teach or suggest all the claim limitations. Also, according to the Supreme Court’s decision in *KSR Int’l. Co. v. Teleflex, Inc., et al.* (“KSR”), the Examiner must identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. Applicant’s analysis below demonstrates that the Examiner has not satisfied these basic requirements.

Requirement to Teach or Suggest All Claim Limitations

Regarding claim 1, the Examiner concedes that “Stanforth doesn’t teach expressly, the mobile station being further adapted to participate in wireless P2P (peer-to-peer) communications by communicating directly with another mobile station using signals in form similar to the cellular communications signals and using said cellular spectral resource, wherein, the cellular communications signals are CDMA (code division multiple access) signals or OFDM (orthogonal frequency division multiplexing) signals”. Applicant agrees with the Examiner.

In view of the Examiner’s admitted difference between Applicant’s claimed invention and Stanforth, the Examiner looks to the disclosure of Haller. However, Applicant submits that Haller does not teach or suggest a mobile station adapted to communicate directly with another mobile station “using signals in form similar to the cellular communication signals” as recited in claim 1 of the present application. Rather, Haller teaches that completely different communication signals are used. For instance, with reference to Figure 1A, Haller teaches that the device 106 communicates using short-range radio signals 110 to other devices such as the

Appl. No. 10/815,717

PDA 107B and the laptop 107D. The short-range radio signals 110 used for communicating with the other devices are not the same as the cellular signals 111 used to communicate with the wide area network 105. This is evident from column 4, line 47 to column 5, line 7 in which Haller teaches communication means with the other devices such as Bluetooth and 802.11. Short-range radio signals such as Bluetooth signals and 802.11 signals are clearly not cellular signals. Moreover, Haller provides no hint or suggestion that the short-range radio signals 110 are in form similar to the cellular signals 111. Haller is vague as to the form of the short-range radio signals 110, but suggests that the short range radio signals 110 are completely different in form from the cellular signals 111 because they are completely different signals that are used for a completely different purpose. Specifically, the short range radio signals 110 are used in the short distance wireless network 116 while the cellular signals 111 are used in the wide area network 105. Therefore, Haller does not teach communicating directly with another mobile station using signals in form similar to the cellular communication signals.

Communication between devices in short range is a problem that is solved by short range radio signals such as Bluetooth or 802.11. In short range protocols like Bluetooth or 802.11, bandwidth allocation among a large number of users is not an issue, as both drastically limit the number of concurrent users compared to long range communication protocols. Communication between devices in short range is typically limited to only a few devices. On the other hand, communication between devices in a wide area network typically involves a large number of users. Therefore, communication between devices in a wide area network is a problem that involves considerable bandwidth allocation in order to support a large number of users. Cellular communication protocols using CDMA or OFDM implement this bandwidth allocation and are not applied in short range wireless communication schemes. Since Haller uses short range radio signals such as Bluetooth or 802.11 between devices, Haller teaches away from communicating directly with another mobile station using signals in form similar to the cellular communication signals.

Even if one could interpret Haller so that the short-range radio signals 110 are signals in form similar to the cellular communication signals 111, which Applicant does not concede, there is no teaching or suggestion that the short-range radio signals are "using said cellular spectral resource" as recited in claim 1 of the present application. Rather, Haller suggests that the short-

Appl. No. 10/815,717

range radio signals 110 use a resource that is different from the cellular spectral resource of the cellular communication signals 111. For instance, with reference to Figure 3A, Haller indicates that completely different circuitry is used for communicating the cellular signals 111 and the short range radio signals 110. Details of the circuitry are described in column 10, lines 24-36. Applicant submits that the use of different circuitry implies that the short range radio signals 110 do not use the cellular spectral resource of the cellular signals 111. Rather, the short range radio signals 110 use its own resource. Therefore, Haller does not teach communicating directly with another mobile station using said cellular spectral resource.

The Examiner concedes that "the above combination [of Stanforth and Haller] doesn't teach expressly, communicating directly with a cellular base station using cellular communications signals transmitted on a cellular spectral resource". Applicant agrees with the Examiner.

In view of the Examiner's admitted difference between Applicant's claimed invention and the combination of Stanforth and Haller, the Examiner looks to the disclosure of Lietsalmi. Applicant appreciates that Lietsalmi teaches that "the mobile station 10 includes an antenna 12 for transmitting signals to and for receiving signals from a base site or base station 30" in column 4, lines 22-25. However, much like Stanforth and Haller, Lietsalmi does not teach or suggest a mobile station adapted to communicate directly with another mobile station "using signals in form similar to the cellular communication signals" as recited in claim 1 of the present application. Furthermore, much like Stanforth and Haller, Lietsalmi does not teach or suggest communicating directly with another mobile station "using said cellular spectral resource" as recited in claim 1 of the present application. Since the Examiner has made no contention that Lietsalmi teaches the subject matter, no further remarks are provided on this matter.

In view of the foregoing, none of Stanforth, Haller, and Lietsalmi teach or suggest a mobile station adapted to communicate directly with another mobile station "using signals in form similar to the cellular communication signals" as recited in claim 1 of the present application. Furthermore, none of Stanforth, Haller, and Lietsalmi teach or suggests a mobile station adapted to communicate directly with another mobile station "using said cellular spectral resource" as recited in claim 1 of the present application. Therefore, the combination of Stanforth, Haller and Lietsalmi fail to teach or suggest all claim limitations of the present

Appl. No. 10/815,717

application.

Requirement to Establish Reason to Combine References

As noted above, KSR requires the Examiner to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does. Applicant submits that the Examiner has not provided sufficient reason to combine the prior art, as the Examiner has not considered that the prior art teaches away from combining the prior art. Further explanation is provided below.

KSR suggests that when prior art teaches away from combining certain known elements, such a combination is likely to be nonobvious under 35 U.S.C. §103. Specifically, KSR discussed in some detail *United States v. Adams*, 383 U.S. 39 (1966), stating in part that in that case, “[t]he Court relied upon the corollary principle that when the prior art teaches away from combining certain known elements, discovery of a successful means of combining them is more likely to be nonobvious.” (KSR Opinion at p. 12). In the present case, it can be seen that the prior art teaches away from combining certain known elements, which according to KSR means that the combination is likely nonobvious. For instance, *Stanforth* teaches away from combining the known element from *Lietsalmi* where a mobile station communicates with a base station. Further explanation is provided below.

The Examiner has combined *Lietsalmi*’s teaching where a mobile station communicates with a base station with the combination of *Stanforth* and *Haller*. However, it can be seen that *Stanforth* teaches away from using a base station. *Stanforth* describes in paragraph 0038 that “Routers and gateway nodes are also used, as described hereinbelow, for connecting ad-hoc terminals 12 serviced by one gateway to another ad-hoc terminal serviced by another gateway, as disclosed in above-mentioned [commonly-owned] application Ser. No. 09/815,157.” (emphasis added) *Stanforth* describes the commonly-owned application earlier in paragraph 0009 and states that “The ad-hoc, peer-to-peer radio system of this patent does not have, nor require, a base station, as conventional cellular systems, personal communications system (PCC), and the like, require.” (emphasis added) Therefore, Applicant submits that *Stanforth* teaches that the ad-hoc peer-to-peer radio system, which has routers/gateways, does not have base stations as in conventional cellular systems. This implies that the routers/gateway in *Stanforth* is not a cellular base station, and that *Stanforth* explicitly teaches away from using a base station as such.

Appl. No. 10/815,717

Seeing as though Stanforth teaches away from combining the known element from Lietsalmi where a mobile station communicates with a base station, it can be seen that Stanforth teaches away from the Examiner's proposed combination of prior art. Therefore, according to KSR, the Examiner's proposed combination of prior art is likely non-obvious.

In view of the foregoing, Applicant submits that claim 1 of the present application is patentable over Stanforth, Haller, and Lietsalmi.

Applicant submits that the remaining claims are patentable for similar reasons provided above in respect of independent claim 1. Furthermore, Applicant submits that the remaining claims recite additional features not found in the prior art. Examples are provided below.

Claim 3 defines that the mobile station has at least two receivers: a first receiver for receiving PMP communications on a downlink PMP band, and a second receiver for receiving PMP communications on an uplink PMP band. The Examiner contends that Stanforth teaches this feature in paragraphs 0038, 0041, and 0044. However, none of these portions teach or suggest a mobile station with at least two receivers. Applicant appreciates that Stanforth teaches "a plurality of mobile radio terminals 12 capable of receiving and transmitting at least one of voice and data communications" in paragraph 0038, but this does not suggest that any of the mobile terminals have at least two receivers.

Claim 4 defines further features relating to the at least two receivers. Applicant submits that the Stanforth does not teach these features for the same reasons provided above for claim 3.

Claim 6 defines how the mobile device listens to PMP communications from the network on the downlink PMP band for maintenance purposes. The Examiner contends that Stanforth teaches this feature in paragraphs 0038, 0041, and 0044. However, none of these portions teach or suggest a mobile station listening to PMP communications for maintenance purposes. Applicant submits that Stanforth is silent with respect to listening to PMP communications for maintenance purposes.

Claim 8 defines that the mobile station is adapted to maintain linked state transitions between states for PMP communications and at least one state for P2P communications. The Examiner contends that Stanforth teaches this feature in Figure 3a, and paragraphs 0038, 0041,

RECEIVED
CENTRAL FAX CENTER

AUG 22 2007

Appl. No. 10/815,717

and 0044. However, none of these portions teach or suggest a mobile station maintaining linked state transitions between states for PMP communications and at least one state for P2P communications. Applicant appreciates that submits that Stanforth teaches P2P and PMP; however, Stanforth is silent with respect to maintaining linked state transitions between states for PMP communications and at least one state for P2P communications.

In view of the foregoing, Applicant submits that claims 1-8, 10-17, 25-28, 30-32 and 34 are patentable over Stanforth, Haller and Lietsalmi. The Examiner is respectfully requested to reconsider and withdraw the rejection of these claims.

Favorable consideration is requested.

Respectfully submitted,

SHALINI PERIYALWAR ET AL.

By


R. Allan Brett

Reg. No. 40,476

Date: August 22, 2007

RAB:PDB:mcg